



DEC 0 1 2003

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of: Stephen A. L.

Serial No.:

09/667,046

Filed:

September 21, 2000

For:

**DUAL DAMASCENE PROC** 

WITH NO PASSING METAL FEATURES

Group:

2811

Examiner:

Hung K. Vu

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Mail Stop Appeal Brief-Patents

Sir:

## APPELLANTS' REPLY BRIEF UNDER 37 C.F.R. §1.193

In response to the Examiner's Answer mailed September 24, 2003, the Appellants submit

• this Reply Brief in triplicate as required by 37 C.F.R. §1.193.





## I. Reply to Examiner's Arguments

On page 6 of the Examiner's Answer, the Examiner sets forth a brief interpretation of FIGURE 8 with respect to Appellant's claims. The Examiner has erroneously included both layers 830 and 832 as constituting a first interlevel dielectric layer while at the same time designating layer 830 as a third interlevel dielectric layer. A more consistent interpretation of FIGURE 8 is that layer 832 constitutes a first interlevel dielectric level.

The Examiner reasserts the argument that conductive layers in components constitute interconnects. For example with respect to the layer of metal silicide 13 in Huang, the Examiner asserts that it provides an interconnection between layers 12 and 44. Layers 12 and 13 are parts of a component. It is well understood by those of ordinary skill in the relevant art that an interconnect is a conductive metal used to electrically couple various integrated components and circuits of a device. The metal silicide 13 shown in FIG. 10 of Huang is not an interconnect.

The Examiner made a similar arguments with respect to the titanium silicide layer 9 in Yoo. As stated in Appellant's Brief, a silicide layer comprising a portion of a gate structure is not an interconnect. Similarly, in Inohara the silicide layer 25 relied on by the Examiner is a part of a component and is not an interconnect. It is a silicide layer 25 that is located in source/drain regions 22a/22b of a component.

The Appellant submits that the Examiner is not interpreting Appellant's claims consistent with the interpretation a person of ordinary skill in the art would give such claims. This is particularly critical with respect to his interpretation of the meaning of "interconnect." Several times in his Answer, the Examiner states that the feature of a via being a metal filled opening between layers of a semiconductor device to provide an electrical connection is not recited in the



rejected claims. The Appellant submits that it is well understood by those skilled in the art that an interconnect, as such term is used in the claims, is a conductive material.

## II. Conclusion

For the reasons set forth in Appellant's brief, Huang, Yoo and Inohara do not anticipate the Claims on appeal. Accordingly, the Appellants respectfully request that the Board of Patent Appeals and Interferences reverse the Examiner's Final Rejection of all of the Appellants' pending claims.

Respectfully submitted,

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